



Food and Drug Administration  
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U & I Corporation  
Mr. Young-Geun Kim  
Regulatory Affairs Specialist  
20, Sandan-ro 76beon-gil (Road)  
Uijeongbu-si, Gyeonggi-do  
Republic of Korea 480-859

February 25, 2015

Re: K143417  
Trade/Device Name: ANAX™ 5.5 Spinal System  
Regulation Number: 21 CFR 888.3070  
Regulation Name: Pedicle screw spinal system  
Regulatory Class: Class II  
Product Code: MNH, MNI  
Dated: November 20, 2014  
Received: December 18, 2014

Dear Mr. Kim:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing

(21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

<http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

**Mark N. Melkerson -S**

Mark N. Melkerson  
Director  
Division of Orthopedic Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known)

K143417

Device Name

ANAX 5.5 Spinal System

Indications for Use (Describe)

ANAX 5.5 Spinal System is a posterior, noncervical pedicle fixation system intended to provide immobilization and stabilization of spinal segments in skeletally-mature patients as an adjunct to fusion by autogenous bone graft in the treatment of the following acute and chronic instabilities or deformities of thoracic, lumbar and sacral spine:

- Spondylolisthesis (Grade 3 and 4)
- Degenerative spondylolisthesis with objective evidence of neurological impairment
- Trauma (i.e., fracture or dislocation)
- Spinal stenosis
- Deformities or curvatures (i.e., scoliosis, kyphosis, and/or lordosis)
- Tumor
- Pseudoarthrosis
- Failed previous fusion

Type of Use (Select one or both, as applicable)

☒ Prescription Use (Part 21 CFR 801 Subpart D)

☐ Over-The-Counter Use (21 CFR 801 Subpart C)

**PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.**

### FOR FDA USE ONLY

Concurrence of Center for Devices and Radiological Health (CDRH) (Signature)

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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## 510(k) Summary

**Manufacturer:** U & I Corporation  
20, Sandan-ro 76beon-gil(Rd), Uijeongbu-si, Gyeonggi-do,  
Korea, 480-859

**Sponsor:** U & I Corporation  
20, Sandan-ro 76beon-gil(Rd), Uijeongbu-si, Gyeonggi-do,  
Korea, 480-859

**Sponsor Contact:** Young-Geun, Kim, Regulatory Affairs Specialist  
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ygkim@youic.com

**Date Prepared:** November 20, 2014

**Device Name:** Trade Name: ANAX™ 5.5 Spinal System

**Classification Name:** Pedicle screw spinal system, per 21 CFR 888.3070

**Common Name:** Pedicle screw spinal fixation system

**Product Code:** MNH, MNI

**Predicate Devices:** OPTIMA™ Spinal System (K024096)  
Fixpine II System™ (K100765)  
ANAX™ 5.5 Spinal System (K132101)

### Description of Device:

ANAX™ 5.5 Spinal System is manufactured by U&I corporation. ANAX™ 5.5 Spinal System is a top-loading multiple component, posterior spinal fixation system and minimally invasive surgery system which consist of pedicle screws, rods, set screws, connectors, and a transverse (cross) linking mechanism. ANAX™ 5.5 Spinal System allows surgeons to build a spinal implant construct to stabilize and promote spinal fusion. ANAX™ 5.5 Spinal System components are supplied non-sterile, single use and are fabricated from medical grade titanium alloy (ASTM F136) and medical grade cobalt-chromium-molybdenum alloy (ASTM F1537). Specialized instruments made from surgical instrument grade stainless steel are available for the application and removal of ANAX™ 5.5 Spinal System implants.

**Intended Use:**

ANAX™ 5.5 Spinal System is a posterior, noncervical pedicle fixation system intended to provide immobilization and stabilization of spinal segments in skeletally-mature patients as an adjunct to fusion by autogenous bone graft in the treatment of the following acute and chronic instabilities or deformities of thoracic, lumbar and sacral spine:

- Spondylolisthesis (Grade 3 and 4)
- Degenerative spondylolisthesis with objective evidence of neurological impairment
- Trauma (i.e., fracture or dislocation)
- Spinal stenosis
- Deformities or curvatures (i.e., scoliosis, kyphosis, and/or lordosis)
- Tumor
- Pseudoarthrosis
- Failed previous fusion

**Substantial Equivalence:**

ANAX™ 5.5 Spinal System is substantially equivalent to OPTIMA™ Spinal System (K024096), Fixpine II System™ (K100765) and ANAX™ 5.5 Spinal System (K132101) in design, material, mechanical performance, function and intended use.

### **Technological Characteristics**

The purpose of the submission is to add axial, domino, and lateral connectors to the spinal system. The predicate and proposed devices have the similar intended use and basic fundamental scientific technology and share the following similarities;

- Indications for use
- Design features
- Same or similar materials
- Mechanical performance

### **Performance Testing**

ANAX™ 5.5 Spinal System was tested in a non clinical setting (bench testing) to assess mechanical performance of this device. Static mechanical tests (axial gripping capacity test, torque gripping capacity test) were performed according to ASTM F1798. The testing verifies that performance of the ANAX™ 5.5 Spinal System is substantially equivalent to the predicate devices.

### **Conclusion**

The data and information provided in this submission support the conclusion that the ANAX™ 5.5 Spinal System is substantially equivalent to its predicate devices with respect to indications for use and technological characteristics.